

REMARKS

Claims 2-4, 6, 11-13 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable under Dyck et al. (U.S. Patent No. 6,393,913 B1), Werner (U.S. Patent No. 6,133,059), Park et al. (U.S. Patent No. 5,747,690), and Hashimoto (U.S. Patent No. 6,543,285 B2). In response, Applicant amended independent claim 11 to define at least one insulating solid piece that connects at least an end of the first stable electrode wall near the second stable electrode column to the second stable electrode column, and an end of the second stable electrode wall near the first stable electrode column to the first stable electrode column, and respectfully traverses the rejection as it applies to the amended claim.

As shown in FIGs. 1-2 of the present invention, an insulator wall 21 is interposed between first and second stable electrodes 19a, 19b. The insulator wall 21 serves to couple the first and second stable electrodes 19a, 19b and in particular the columns 23 of the first and second stable electrodes. Amended claim 11 now defines an insulating solid piece that connects the first stable electrode wall to the second stable electrode column. The first stable electrode wall is connected to the base substrate through the first and second stable electrode columns. Thus, the movement of the first stable electrode wall is reliably restrained between the first and second stable electrode columns, and the resulting structure provides a stronger rigidity than a stable electrode wall can deliver in a single stable electrode column. Similarly, the at least one insulating solid piece also serves to connect the second stable electrode wall to the first stable electrode column. The second stable electrode wall is connected to the base substrate through the first and second electrode columns. The

movement of the second stable electrode wall is reliably restrained between the first and second stable electrode columns. This structure provides a stronger rigidity than the stable electrode wall can deliver as a single stable electrode column, similar to the case of the first stable electrode wall. Since none of the cited references disclose or suggest this structure, as now recited in amended claim 11, Applicant respectfully requests withdrawal of the §103 rejection of claims 2-4, 6, 11-13 and 16.

Claim 15 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Dyck, Werner, Park and Hashimoto, and further in view of Fujii et al. (U.S. Patent No. 6,227,050 B1). Applicant traverses the rejection for the reasons recited above with respect to the rejection of independent claim 11.

Fujii is merely cited by the Examiner as teaching conductive wiring pattern 122 and an insulating film with a connector piece to the electrodes being surrounded by film, as shown in FIG. 30. Fujii does not disclose or suggest the features of amended claim 11. For this reason, the combination of Fujii and the other cited references fails to achieve the features of the present invention. Accordingly, withdrawal of the §103 rejection of claim 15 is respectfully requested.

New claims 17-18 are added and define limitations removed from currently pending claim 11. More specifically, claim 17 defines the at least one insulating solid piece that is connecting the first and second stable electrode walls. New claim 18 defines the moveable electrode as having a thickness W , and each of the first and second stable electrode walls as having a thickness W . Claim 18 further defines the first and second stable electrode

columns as located in a space between the first and second datum planes, with the first datum plane defined to include an outward surface of the first stable electrode wall and the second datum plane defined to include an outward surface of the second stable electrode wall. Moreover, claim 18 defines that a distance between the first and second datum planes is equal to or larger than three times the thickness W of the moveable electrode.

With respect to claim 18, in addition to the reasons above, Applicant believes that the claim is allowable for the following reasons.

The Examiner asserts on page 2, last line of the Office Action that Park suggests the columns are square and more than three times the width of the electrode wall. (See FIG. 4). However, proportions of features in a drawing are not evidence of actual proportions when drawings are not to scale. (See MPEP 2125). When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurements of the drawing features are of little value. (See *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000). As discussed in Park, FIG. 4 is merely a partially enlarged view of FIG. 3, which does not show a distance between first and second datum planes that is equal to or larger than three times a thickness W of the moveable electrode (See FIG. 3, Col. 4, lns. 61-65, Col. 6, ln. 59 et. seq.).

The Examiner further asserts on page 3, lines 1-3 of the Office Action that Hashimoto teaches the electrodes of the mover and stator are result-effective variables, and have the same dimension “ w ” to provide an effective driving force. Accordingly, the Examiner concludes that it would have been obvious to a person of ordinary skill in the art at

the time of the invention to combine Dyck, Warner, and Park to discover the optimal or workable ranges because it involves only routine skill in the art based on the teachings of Hashimoto. Applicants respectfully traverse this statement.

A particular parameter must first be recognized as a result-effective variable (i.e., a variable which achieves a recognized result) before determination of the optimum or workable ranges of the variable might be characterized as routine experimentation. (See MPEP 2144.05 II. B.). None of the cited references discloses a relationship between first and second datum planes and a wall thickness of a moveable electrode. While the Examiner asserts that Hashimoto teaches this feature, this is incorrect for the following reasons.

First, as shown in FIG. 2 of the present application, a stable electrode 19a has an outer surface that defines a datum plane FP. A second stable electrode 19b has an outer surface that defines another datum plane RP, and a moveable electrode 14 has a thickness W.

Between the datum planes FP, RP there is a defined distance ED. In the present application, claim 18 requires that a distance between the first and second datum planes (i.e., the distance ED) is equal to or larger than three times the thickness W of the moveable electrode. The Examiner recognizes that the Dyck, Warner, and Park fail to teach and suggest these dimensions as result-effective variables, but cites Hashimoto as teaching these dimensions as result-effective variables. However, Hashimoto does not teach these variables.

Instead, Hashimoto teaches a relationship between a width w of electrode fingers 120 of a fixed electrode 100, a width W of electrode fingers 220, a distance d between electrode fingers 120 and electrode fingers 220, and a distance D between ends of

the electrode fingers 120, 220 and basal portions 110, 210 of respective electrodes 100, 200. A maximum displacement A of the moveable electrode 200 is also disclosed by Hashimoto. (See FIG. 3 and Mathematical Expression 3 in Col. 11). Hashimoto does not disclose or suggest a variable that includes a thickness of the basal portion 210 of the moveable electrode 200, which corresponds to the thickness W of the moveable electrode of the present application. Moreover, Hashimoto is silent regarding the distance between first and second datum planes (i.e., a distance between outer surfaces of stable electrode walls). Therefore, since Hashimoto and the other references fail to even recognize these dimensions as result-effective variables, no determination of an optimum or workable range of the variables can be characterized as routine experimentation.


Accordingly, for all of the reasons recited above, Applicants respectfully submit that the cited references do not recognize any relationship between the distance between datum planes defined by a distance between the outside surfaces of the stable electrode walls, and the thickness of the wall of the moveable electrode, and therefore there can not be any optimization of these parameters. Moreover, the cited references, even taken in combination, fail to disclose or suggest a distance between first and second datum planes as being equal to or greater than three times a thickness W of the moveable electrode. For these additional reasons, allowance of new claim 18 is respectfully requested.

For all of the foregoing reasons, Applicant submits that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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